

Kentucky Teacher

March 2008

News for the Nation's Most Innovative Educators

www.education.ky.gov

Guiding success for primary readers

Page 11

What's Inside

KentuckyShow! premieres September 2008	2	Language curriculum is expanding to meet needs of students	8
Budget cuts will be felt all the way into classrooms	3	Barren County grant writer shows district the money	9
2009 CATS testing-window change proposed ...	4	Leadership networks are 'priceless' to educators	10
SEEK program is key to school funding	5	Meet two state board members	12
Before-school tutoring pushes Greathouse/Shryock to success	6	E-mission: Operation Montserrat	16
Nelson County ag students 'build' a heifer	7		



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Kentucky Teacher

News for the Nation's Most Innovative Educators

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Front cover: Kelly Robertson, a primary teacher at Colonel William Casey Elementary (Adair County), observes Katie Lee and Tyler Rooks as they work together on a storyboard. Robertson developed ☒ 5 for Reading Success to define and refine teaching tools for developing readers. (See Page 11.)

Talk to the Experts ...

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KentuckyShow! will take students on trip across state

Next fall, KentuckyShow! will provide a new field trip destination for students from throughout the state. The multimedia production will showcase the natural and man-made surroundings of all areas of the state and focus on the beauty, lore, culture and special character of Kentucky and its residents. Kentucky is the only state in the nation to have such a production.

While the program doesn't open to the public until September, Stephanie Darst, education curator for the Kentucky State Fair for the past 16 years, is creating classroom resources to accompany the program for all grade levels in arts and humanities, Kentucky history and culture, science, and technology. Teachers can access these curriculum materials in August on the KentuckyShow! Web site (www.kentuckyshow.com).

KentuckyShow! is a multi-sensory production. As visitors walk into a glass-walled room, the brightness fades, and the room is transformed into a darkened theater. The screen appears, and the show begins on a 20-foot-wide screen that sprouts "wings." Expanding to 40 feet across, the screen fills the audience's field of vision. Voices and music surround the audience as images of Kentucky's unique history, contemporary life and natural beauty fill the screen.

This is what visitors to KentuckyShow! will experience when the new 100-seat venue opens in September at the Kentucky Center in downtown Louisville.

Teachers also may want to combine a visit to KentuckyShow! with same-day visits to other Main Street Louisville attractions such as the Muhammad Ali Center; Frazier International History Museum; Slugger Museum; Louisville Science Center; and Kentucky Museum of Art and Craft.

KentuckyShow! and Stage One, Louisville's nationally acclaimed professional theater for young audiences, will offer a discount package for same-day visits to both venues. The theaters are adjacent inside the Kentucky Center.

The KentuckyShow! schedule will be daily Tuesday through Friday, beginning at 10 a.m., 11 a.m. and noon for elementary, middle and high school student groups. Price per student will be \$5.

Donna Lawrence Productions is creating

the show and designing the theater experience. The production team has traveled more than 7,000 miles across the state to capture images to tell Kentucky's story. It is estimated that more than 60 hours of footage will be gathered and distilled into the 30-minute finished production.

Lawrence says KentuckyShow! will provide viewers access to places and people they may not otherwise get a chance to see or meet. "What we hope to do is connect viewers with Kentucky in new and unforgettable ways, inspiring some to make their own trek into new places in our state. We hope that, after seeing the show, many will treasure the choices we make today that shape the Kentucky our children will know tomorrow," she said.

MORE INFO ...

www.kentuckyshow.com

KentuckyShow!, (502) 562-7800, or e-mail Tim King at timking@kentuckyshow.com



Photo submitted by KentuckyShow!

KentuckyShow! includes images like this of Cumberland Falls, often called the "Niagara of the South." The 60-foot falls is estimated to have existed millions of years before Dr. Thomas Walker explored the Kentucky frontier in 1750. A moonbow is visible on moonlit evenings at only two places in the world: Cumberland Falls and Victoria Falls in Africa.



Photo by Amy Wallot

Getting their just rewards

Tanner Bowen, left, plays with a yo-yo after he and other members of the 6th-grade academic team, Bethani Derifield, Austin Muncy and Olivia Miller, finish lunch in the Hard Work Café at Louisa Middle School (Lawrence County). Students who are nominated by their teachers for working hard, having perfect attendance and receiving no disciplinary actions during the week get to have lunch and hang out at the café on Fridays. Instead of dining in the school cafeteria, nominated students can bring a friend and eat lunch, watch TV and play with toys and games in the recently remodeled conference room.

COMMISSIONER'S COMMENTS

By Jon Draud, Commissioner of Education

Budget cuts will be felt all the way into classrooms

The talk around Kentucky school districts this winter has been what the state's budget situation will mean to public schools. I've tried to keep Kentucky educators informed about the state education budget as decisions were made about school funding for the remainder of this school year and about the budget that will fund the next two school years.

I believe keeping you informed about activities in Frankfort that will affect your work is an important part of my job. That's why in early January I conducted a Webcast of my meeting with superintendents to discuss budget cuts. You've also received several e-mails from me letting you know about the budget situation and asking for your input and questions on the matter.

It's apparent from some of the replies I received that quite a few educators don't understand that what happens to the state budget affects teaching and learning in their schools. Many have indicated that they don't understand the state education budget or why funding for the Support Education Excellence in Kentucky (SEEK) program is something about which they should be concerned.

As a former legislator, I believe public education needs a well-informed constituency. It's true that legislators, superintendents, board members, district administrators and school councils deal more closely with budget matters than do classroom teachers.

However, it's important that all educators have a working knowledge of Kentucky's public education system and how it is funded. It's also important for you to understand how the Kentucky Department of Education determined the budget cuts I proposed to Gov. Steve Beshear for the upcoming biennium. Decisions made for the "big picture" can certainly impact the operation of an individual classroom.

And, while several billion dollars are budgeted annually to fund public schools, that money must sustain many programs on the state and local levels. It must keep the Department of Education programs operating for schools and districts. SEEK money is allocated from the state education budget to all 174 school districts to equalize funding so that students throughout the state have the same opportunities to learn at high levels.

Gov. Beshear asked me in December to

propose ways to cut the 2009-10 state education budget by 12 percent. He relied on the information I provided him, after consulting with department budget experts, superintendents, school leaders and teachers, to prepare the budget he presented to the legislature in late January.

I did not propose cuts in SEEK funds for the coming biennium and neither did the governor. We know that local districts depend on SEEK money for the bulk of their operating budgets.

The General Assembly created SEEK in 1990 as a mechanism for distributing state funding to local school districts. SEEK is an equity-based formula that treats school districts as unique entities. The funding formula takes into account local revenues (school taxes), student demographics and other variables. (See article on Page 5 for more information about SEEK funding.)

Superintendents told me that any cuts to SEEK would further reduce instructional staffing, increase class sizes, hinder efforts to improve student achievement, and eliminate world language, art, music and physical education classes in many districts. SEEK cuts would put technology projects on hold and reduce allocations for school supplies, including high school textbooks. Cuts to SEEK would result in a loss of learning opportunities for many students.

I proposed that the governor take the 12 percent cuts, totaling \$46 million, in four key areas of the education budget: Extended School Services, professional development for teachers, textbooks and safe schools programs. If the legislature and the governor implement these cuts, schools and districts will see immediate effects:

- Textbook purchases will be put on hold. Districts are scheduled to purchase science textbooks beginning in July. The next purchasing cycle is for mathematics textbooks.
- Districts will be looking closely at their textbook purchasing plans in future adoption cycles. (See Page 4 for the commissioner's recommendation to wait on purchasing science textbooks and the department's decision to delay the textbook adoption cycle in 2008-09.)
- Extended School Services, which provide help for students who are falling behind, will be greatly limited.
- Professional development for teachers, which we know is crucial to your ability to increase student achievement, will be limited in choice and availability.

- The cuts in safe schools funds will put innovative programs and activities on indefinite hiatus, effectively slowing or stopping those that provide students and school staff with safe learning environments.

I take the state's budget situation seriously. I know that P-12 public education cannot stand deep cuts, and I am carrying the message to the General Assembly that strong, steady funding of public schools must be a priority.

I think we all have realistic expectations for the budget process during this session of the General Assembly. But public education must have its fair share of state funds if we are to continue the work of improving our schools and preparing Kentucky's children to be successful in the 21st century global society.

Kentucky public schools have shown real progress over the past decade and a half. Our schools are making steady progress toward proficiency. The challenge is for Kentucky to continue to provide the funds required to give all students opportunities to participate in rigorous and relevant programs that will move every student in our public schools to proficiency and beyond.

Teacher recruitment

One thing is certain: public school districts can't sit and wait until the legislature and Gov. Beshear approve a state budget for the next two fiscal years. Our work must go on at every level.

That means many districts must plan now to fill certified vacancies that will occur at the end of this school year because of retirements, transfers and reassignments.

The department's Division of Educator Quality and Diversity is providing a unique opportunity for leadership in all 174 public school districts to meet aspiring Kentucky educators on March 5 and interview them. The division has worked with schools and districts that will need teachers. The division has worked with our colleges and universities that have teacher-preparation programs to identify potential

candidates – the best and brightest candidates – who will graduate this May.

I'm excited about this event and what it will do for teacher recruitment in Kentucky. It's a win-win situation for everyone.

Educators looking for teacher applicants can prescreen a diverse group of highly qualified potential candidates in one day while students in teacher preparation programs can explore a variety of career opportunities in the less-stressful environment of the Kentucky International Convention Center in Louisville.

I believe the Aspiring Educators Career Fair will become an important recruiting tool to help all districts find the right educators to help move their students to proficiency and beyond.

To comment on this topic, contact Commissioner Draud at jon.draud@education.ky.gov.



Draud



Photo by Amy Wallot

A volunteer partner in education

Steve York, right, jokes with 8th-grade student Andy Burchfield in the hallway at Jessie Clark Middle School (Fayette County). After losing his sight five years ago, York began volunteering every day at the school, which his two children had attended. He meets with eight to 10 students each day to talk about grades, behavior and making good choices. "I can't begin to tell you the number of lives he's touched," said Principal Lisa Goodin. "And not just students, adults, too."

2009 CATS testing-window change proposed

By Matthew Tungate

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In spring 2009, the testing window for the Kentucky Core Content Test (KCCT) is expected to be moved to the first 13 days of May. Education Commissioner Jon Draud announced the proposed change during the February meeting of the Kentucky Board of Education.

"I believe most educators will be pleased because it will provide additional instruction time prior to testing and reduce the number of days after testing until school is out," Draud said.

State board members had indicated in recent months that they would like to see the testing moved from its late-April window to closer to the end of the school year. However, state Department of Education officials had cited federal No Child Left Behind Act (NCLB) data-reporting deadlines as barriers to making the change.

Ken Draud, associate commissioner of the Office of Assessment and Accountability, said in an interview that NCLB requires states to release test results before schools begin in the fall. The Department of Educa-

tion will work with its test-scoring vendor to speed up the process and with federal officials to make sure the state meets NCLB guidelines.

Draud said school district administrators have been very supportive of the proposal, which would have no effect on this year's KCCT testing. Draud said the move would give schools 10 extra days of instructional time before the 2009 test and reduce the number of days between testing and the end of school.

"It's best for students, it's best for schools, it's best for Kentucky," he said.

To avoid conflicts with Advanced Placement testing, high schools would be allowed to test April 27-May 1, 2009, prior to KCCT testing, under the proposal. But that detail, like many others, still needs to be worked out before the changes would take effect in 2009, Draud said.

At its February meeting, the state board made additional changes to the Commonwealth Accountability Testing System (CATS). The Department of Education will seek bids from testing vendors for a uniform norm-referenced test to administer to all exiting pri-

mary students. Beginning in 2008-09, results from the norm-referenced test in reading and mathematics given to exiting primary students will account for 5 percent of an elementary school's accountability index. EXPLORE test results for 8th-graders will count for 5 percent of a middle school's accountability index beginning in 2008-09.

The state board also agreed that schools would receive new goal and assistance lines on their individual accountability growth charts after results are determined for the 2006-07 and 2007-08 accountability cycle. Parts of the KCCT were changed before the 2006-07 test because of revisions to the Program of Studies and Kentucky's Core Content for Assessment. The Department of Education used a concordance model to adjust test results for 2006-07 and will use the model with this spring's test so results are comparable to preceding years' scores.

This year is the first year in which all 11th-graders will take the ACT. Those scores and results from the PLAN assessment administered to 10th-graders will comprise the ACT Index, which counts for 5 percent of each high school's CATS accountability.

Vice Chair Bonnie Lash Freeman reminded the board it had agreed to add the ACT to accountability for this year and then review whether its weight should be increased after reviewing future data.

In other actions, the board:

- approved a statewide waiver allowing school boards to give school councils funding and staffing numbers for the upcoming school year in May rather than March because of uncertain state funding
- approved changes to the Kentucky High School Athletic Association bylaws that include delaying the start of basketball season until after the state football tour-

namment semifinals and requiring students who play varsity athletics for a high school before entering 9th grade to sit out a year if they enroll as a 9th-grader at another high school

- gave final approval to revise 702 KAR 3:270, SEEK funding formula, related to data collection, incorporating additional calculations related to growth and providing provisions for additional funding
 - heard from the Covington Independent school district on its efforts to improve low-performing schools
 - approved district facility plans for Kenton, LaRue and Pulaski counties and Eminence Independent school districts, and amended district facility plans for Whitley County and East Bernstadt Independent school districts
 - heard a report from Commissioner Draud on how the Department of Education plans to reduce costs by decreasing the number of its memorandum of agreement (MOA) employees and limiting travel
 - heard in committee about a draft adolescent literacy plan, which includes increasing teacher competency in literacy instruction, improving coordination of literacy efforts at the state and local levels and using data to make decisions at state and local levels; an action plan for A5 and A6 schools; and assistance to schools with high dropout rates
 - agreed to cancel its March meeting and moved its board retreat in May from Lake Barkley to Frankfort
- The board's next meeting will be April 2 and 3 in Frankfort. More information about the board is available at www.education.ky.gov. Click on "KDE QuickLinks" in the left-hand menu, scroll down and select "Kentucky Board of Education."



Photo by Amy Wallot

Preparing for assessments

Carolyn Martin, Fayette County district assessment coordinator (DAC), back, Amanda Ginn, assistant to the Fayette County DAC, and Jana Beth Francis, Daviess County DAC, participate in an online meeting of DACs from throughout the state to provide feedback on training that will be administered to nearly 750 school and district personnel involved in this year's administration of the Kentucky Core Content Test. Kentucky public school students will take the test during the spring testing window, April 21 to May 2.

2008-09 textbook adoption delayed

Kentucky Education Commissioner Jon Draud notified school superintendents in mid-February of the decision to delay the textbook adoption cycle for mathematics materials for the 2008-09 school year. The Kentucky Department of Education's leadership team made the decision in light of anticipated budget cuts to Flexible Focus Funds, which provide money for textbook purchases. (See Commissioner's Column on Page 3.)

The commissioner also recommended that schools delay purchasing obligations for science materials, which are scheduled for adoption this school year, until the legislature passes the biennial budget bill and Gov. Steve Beshear signs it.

The last time textbook funds were cut in the state education budget, the adoption schedule was not adjusted, causing problems for districts. "For this reason, we are putting the mathematics adoption on hold for a year and will adjust the adoption cycle from that point forward so that schools will not be expected to pay for textbooks for two adoption cycles once the funds are restored," the commissioner said in his e-mail to superintendents.

SEEK program is key to school funding

By Matthew Tungate

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On average, Kentucky school districts received about 57 percent of their revenue for expenses such as salaries, utilities and transportation from the state's portion of the Support Education Excellence in Kentucky (SEEK) formula in 2006-07, the last year for which numbers are available. The other 43 percent of revenue came from local taxes and other sources.

However, many of the state's largest districts, including Jefferson and Fayette counties, and wealthiest, including Anchorage and Southgate independents, receive far below the average. Of the state's 174 public school districts, 140 actually received more than 57 percent of their funding from the state in 2006-07. In fact, 48 districts (almost one of every four in the state) received more than 75 percent of their general fund revenue from the state portion of the SEEK formula.

That is why educators and elected officials are closely watching this legislative session to see if cuts will be made to the SEEK formula. Cutting the SEEK base would be very bad, said Commissioner Jon Draud, a former state legislator.

"The consensus in the school community is that the impact of any cuts to SEEK would be devastating and extremely harmful to students," Draud said in a December letter to Gov. Steve Beshear. "Superintendents say that any SEEK reduction would result in fewer staff, limited options for students and financial hardship throughout their districts."

In his January budget address to the General Assembly, the governor eased educators' minds by proposing no cuts to the base amount at the foundation of the SEEK formula, \$3,822 per pupil.

Without an increase to the base, schools are still going backward financially, said Larry Stinson, associate commissioner for the Kentucky Department of Education's Office of District Support Services. "It is a cut in opportunity, if nothing else," he said.

A state Office of Education Accountability study showed that through 2007, the SEEK base per-pupil funding has not increased since 1991 when adjusted for inflation. "It's basically only keeping pace with inflation,

which means we haven't done anything to fund expanded programming," Stinson said.

And as utilities, insurance, fuel, teaching materials and step-pay increases cost more, districts may be forced to hire fewer people, buy fewer classroom materials or cut transportation or extracurricular activities.

To determine a school district's SEEK funding, the Department of Education takes the prior year's average daily attendance and multiplies it by the per-pupil base (\$3,822).

Then Stinson said the department adds on funding for additional factors such as:

- growth over the prior year
- special-needs students
- at-risk students
- home and hospital students
- limited English proficiency students
- transportation based on how a district's costs compare to similar districts and how much is allocated by the legislature

The total of those factors becomes the district's calculated SEEK base.

Each district sets a minimum property tax rate at 30 cents per \$100 of assessed value. The yield of this tax rate is subtracted from the calculated SEEK base amount, and the remainder becomes the state portion due to schools, Stinson said. So property-rich districts require less state funding, and property-poor districts require more, he said.

Districts must subtract \$100 per student for each district's capital outlay fund, Stinson said.

"That's it," he said. "It's really fairly simple. SEEK really isn't that complicated, but people think it is."

Districts can actually raise more money through more local taxes, either on property, personal property like boats, utilities, or payroll, among others.

Districts can set additional local tax rates that would raise 15 percent of their calculated SEEK base including their 30-cent property tax figure. If that amount does not raise 150 percent of the statewide average per pupil, then the state will pay enough to bring the amount per pupil up to 150 percent of the state average. That portion is called Tier I funding. The legislature establishes what 150 percent of the state average is every two years.

There is also Tier II funding, in which dis-



Photo by Amanda Ratliff, Paintsville Independent Schools

Girls in science

Freshmen Whitney Slone, left, and Whitney Long conduct an experiment using two basic household chemicals, sodium bicarbonate and calcium chloride, to explore endothermic and exothermic reactions during class at Paintsville High School (Paintsville Independent).

tricts can set their tax rate to receive an additional 30 percent of the calculated SEEK base plus Tier I, including the state's equalization money.

"SEEK itself, contrary to popular thought, is really not that complicated," Stinson said. "It really boils down to how much is the SEEK base as determined by the legislature; what was enrollment last year and did it increase any this fall; and what happened to the value of property in your district? Those are the things that will determine what your SEEK amounts are."

Problems occur at the local level because of the timing of SEEK information, Stinson said. Local districts begin proposing budgets in January for the following school year. The Department of Education gives each district a forecast SEEK estimate so they will have a number to start from, he said.

"It's all estimates, and if those estimates are off, the forecast is going to be off," Stinson said. "We need to do a better job of educating folks about the importance of these pieces of data and how they can do their own projections better than we can."

The Department of Education has traditionally used information based on trends, and it incorporates information from other state agencies and from districts. In years such as this – when the legislature sets a two-year budget – the base amount will not be set until near the end of the legislative session.

The department will send out revised SEEK forecasts based on budget bills in the General Assembly if they significantly change the base funding, Stinson said.

Once the legislature passes the state budget in late March or early April, the department still won't get end-of-year budget reports and daily attendance reports from districts until July or August – when the next school year has already started.

The state Revenue Cabinet sends official assessed values beginning in July, and education officials can provide a tentative SEEK amount in September. The department sends the final SEEK calculation in March – nine months after the fiscal year began.

"We are really in one of those vicious cycle kinds of things: We need to give districts the numbers so they can give us the next number, but we can't give them this number until they give us that number. There may be a case where 170 districts have given us their information, but we can't give those districts the next number until those other four districts get theirs in," Stinson said. "We have to have it all because it will make a change on some things."

MORE INFO ...

<http://education.ky.gov/KDE/Administrative+Resources/Finance+and+Funding/School+Finance/SEEK+and+Tax+Rates>

Before-school tutoring pushes Greathouse/Shryock to success

By Matthew Tungate

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When 5th-grade teacher Beatrice Jones first started teaching at Greathouse/Shryock Traditional Elementary School (Jefferson County), she noticed that students were mentally drained by the time they arrived for after-school tutoring. So she started asking parents to drop off students before school for mathematics tutoring, said the 31-year teaching veteran who is now in her 13th year at the school.

For the last few years, Greathouse has expanded its before-school tutoring program to incorporate more students and more teachers, including Jones. "I really believe that has been the success story for math," she said.

What a success story it has been. Exceptional achievement in mathematics and its ability to eliminate achievement gaps helped earn Greathouse a place as one of five Kentucky public schools to be named a U.S. Department of Education 2007 No Child Left Behind (NCLB) Blue Ribbon School.

The award recognizes schools that help students achieve at high levels and that make significant progress in closing achievement gaps. The program rewards schools that score in the top 10 percent statewide in reading and mathematics on state assessments. Blue Ribbon Schools also must make Adequate Yearly Progress under the requirements of the federal NCLB Act.

In mathematics, 92 percent of students at Greathouse scored at proficient or above on the 2006 Kentucky Core Content Test (KCCT). That is a 25-point increase from 2002. African-American students' achievement gap dropped from 25 points in 2002 to -2 in 2006. No students scored at the novice level in mathematics in 2006.

"I feel like we have student leaders at our school," Jones said. "These are going to be the future doctors, these are going to be the people that are going to figure out what is wrong with global warming and are going to help us fix it. And when I look at my class, that

is what I see – I see our future. And if these are the best and the brightest, they should be more than proficient."

Greathouse also made strides in reading, with 91 percent of students scoring at proficient or distinguished levels. Less than 1 percent of all students scored novice in reading in 2006.

The school had a 2006 academic index of 105.3, compared to the district index for all elementary schools of 81.3.

Principal Karla Davis, in her sixth year at the school, credits much of the school's success to early-morning and daytime group work. Teachers identify students, and parents bring them to school early for tutoring, she said.

Research shows that one-on-one instruction or small-group work can move students out of novice and apprentice levels. "And I truly feel that is what has done it. It's just the small group, the individual attention," Davis said.

Dana Sanders, exceptional children education/learning disabilities resource teacher in her fifth year at Greathouse, does before-school tutoring in mathematics and reading. She also works with small groups of students during the day across grade levels, specifically with students who are novice learners.

When students excel in small groups, that success carries over into the regular classroom, she said. "To see a spark in a student's eye when he or she finally understands a concept that we have been working on for some time, that makes me feel good whether we win awards or not," Sanders said.

The traditional program

Greathouse students know their school provides a nurturing learning environment. Fifth-grader Jaela Packer said teachers care about each student. Teachers tell students how to do something, then show them, then let them do it.

"If you have any problems, they'll teach it again, just for you," she said. "If there's only one person, they'll go back over it."

This is the third profile in a series about Kentucky's five 2007 Blue Ribbon Schools. The April issue of *Kentucky Teacher* will feature Sorgho Elementary (Daviess County). The May issue will feature Whitesville Elementary (Daviess County). Highlands High School (Fort Thomas Independent) and Farmington Elementary (Graves County) were featured in earlier issues.

In Jefferson County, parents can choose among schools that provide different learning environments for their children. The traditional program at Greathouse provides a structured environment with an emphasis on patriotism, moral values and basic skills.

Davis said Jefferson County's traditional program is a "textbook-based, paper/pencil program," with a workbook or textbook in each subject. It is sometimes called a "back-to-basics" approach to learning.

"It's not that we don't do anything innovative," Davis said. "Our kids work in groups, they complete projects, they learn through literacy centers and guided-reading instruction, but the majority of our time is spent on basic skills through textbook or paper-pencil instruction."

"I tell parents, 'We're not here to entertain. We're here to educate students,'" she added.

Second-grade teacher Cathy Veasey, who has taught at the school for six of her 28 years in teaching, lives in the Greathouse neighborhood. She applied to teach at the school to be closer to home.

"When I came here, it was such a challenge for me to think about coming to a school that I thought was just going to be pen and paper, because that is against my philosophy," she said. "Over the years, I found out our school may have the basis of textbooks, but you don't stop there."

Students in the district's traditional schools also wear uniforms and have nightly homework. These schools encourage frequent com-



Photos by Amy Wallot

Jennifer Ramage goes over an assignment with her early primary students at Greathouse/Shryock Traditional Elementary to make sure they understand what she is asking them to do.

munication with parents. In Jefferson County, new students are admitted through an annual random lottery based on a student's address, Davis said.

School office staff call if a student doesn't come to school or comes to school without his or her homework. "There's a lot more accountability on the parent's part," Davis said.

Yet the school has the highest PTA participation for elementary schools in the district. "Everybody says, 'Why are you so good?' And I say, 'It's really not a secret. It's the partnership agreement we have between the parent, the student and the school,'" Davis said.

Veasey said Greathouse has an expectation of communication with parents. "We may have conference dates, but conferences are going all the time," she said. "This is as close as you can get to a private school. The parent involvement is amazing."

But with that involvement comes high parental expectations, Principal Davis said. "They don't want to see a low



Upper primary students Kyle Jenkins, left, and Nathan Habimana write notes to pen pals during an assignment at Greathouse/Shryock Elementary.

grade on a report card. They want a phone call two weeks before so they have time to (help their child) improve," she said. "You've got to be a step ahead of the game."

Since the 2001-02 school year, few teachers have left the school for reasons other than retirement, Davis said. And why would teachers want to leave? Greathouse has parental support, few discipline problems and a principal who is flexible and supports them, Davis said.

"This is an ideal program for some families. It's a coveted spot," she said.

MORE INFO ...

www.jefferson.k12.ky.us/schools/elementary/greathouseshryock.html

Nelson County agriculture students connect bones to 'build' a heifer

By Tom Dekle

Nelson County Public Schools

It took about a year for all the meat to soak free of the bones, but in the end, Nelson County High School agriculture teacher Matthew Simpson thinks the project he devised for his animal science class turned out pretty well. While it sounds a bit gruesome, recreating the skeleton of a young cow was a real learning experience for his students.

"I liked trying to find out which pieces went where. It was kind of like working on a 3-D puzzle," said Ashley Thurman, a sophomore in Simpson's animal science class and a member of the FFA chapter he sponsors.

"This is probably the most interesting thing I've ever done in class," said T.J. Best, a senior FFA member. "It's not every day you get to play with cow bones and put a skeleton together. It's definitely something I won't forget."

Their efforts helped create a free-standing skeleton of what was once an 800-pound heifer. The skeleton now stands in Simpson's classroom where students will use it to study animal anatomy.

"It was a pretty daunting task," Simpson said. "I just told my class, 'Here's a 1,000-piece puzzle — let's put it together.'"

A memory sparked the project

The project had its beginnings less than two years ago at the 2006 Kentucky State Fair. Simpson ran into David Newsome, the farm manager at Western Kentucky University, during a visit to the fair. Simpson, a 2005 WKU graduate, was reminded of seeing the skeleton of a 2,000-pound dairy cow in the classroom of Jenks Britt, an agriculture instructor at the university.

"I always thought, 'What a great project for a class to do,'" Simpson said.

Simpson asked Newsome to let him know if any animals ever died at the university farm that he could use for a project with his Nelson County students. In late August, Simpson, his wife, Melinda, and his dad, Jimmy Simpson of Warren

County, headed to the university farm to retrieve a recently deceased heifer.

They eviscerated the animal, loaded the remains into Simpson's truck and drove back to Bardstown. Nelson County students Matt Price and Cameron Tiller helped Simpson remove as much meat from the bones as possible. Then, they soaked the bones in water to begin the maceration process of removing the remaining flesh away from the bones.

If they had boiled the bones, fat would have soaked into the bones and made them smelly, Simpson said.

"We started in September but that was too late," Simpson said. "You really needed heat on your side." Without warm weather, Simpson left the bones soaking in two large garbage cans through the fall, winter and spring. In the spring of 2007, he added yeast pellets to promote bacteria growth as the weather began warming.

"That really started it rolling," he said. To finish the job of preparing the bones, he placed them in a 30 percent peroxide bath, diluted to 15 percent, to "boil off" the remaining flesh and cartilage, Simpson said.

Simpson removed the bones from soaking in August. The final product was buckets of clean, white bones.

This past September, Simpson divided his animal science class into small groups so the students could identify the various bones and begin the task of piecing them together. Through ongoing instruction and independent research, the students identified the bones, determined where they fit into the skeleton and began putting the heifer skeleton back together on a wooden platform using rebar and wood for support.



Animal science instructor Matthew Simpson, right, uses wire to stitch together vertebrae segments of the cow skeleton while student Mitchell Hardin holds the skull. Simpson and his students reconstructed the skeleton of an 800-pound heifer as a class project last fall at Nelson County High School.



Students in Matthew Simpson's animal science class used a diagram of a cow skeleton to find which bone went where in reconstructing a cow skeleton. "It was kind of like working on a 3-D puzzle," said sophomore Ashley Thurman.

Students drilled holes in the bones and used aluminum wire to stitch them together on the platform. Once students started "building" the skeleton, the process took almost two months of class time, about \$120 for supplies "plus a ton of labor" to finish, Simpson said.

Throughout the project, Simpson helped his students make connections between their work on the skeleton and other areas of animal science content as well. As the students studied meat cuts, they were able to use the skeleton to pinpoint



Photos by Tom Dekle, The Kentucky Standard

Kimmi Fulkerson, Mitchell Hardin, Ashley Thurman and T.J. Best, students in Matthew Simpson's animal science class, help support the cow skeleton, while Simpson wires the spine together.

from which part of the animal each cut of meat came.

On "steak day," the students cooked and tasted various cuts of meat. They discussed where the cuts came from and how location on the animal had affected the texture, quality and taste of the different cuts.

While lessons in bone structure and anatomy went hand-in-hand with the project, one of the biggest lessons Simpson said his students learned was the importance of "just sticking to stuff," and seeing a project through to the end, he said.

Ryan Mattingly, a sophomore FFA member, said he especially liked the hands-on aspects of the project. "I think I'll remember it better because of that," he said.

The bone structure of a cow is not really that different from a human, said Mattingly, who plans on becoming a veterinarian. "The way it fits together has human-like characteristics." Putting together the spine was one of his favorite

parts of the project.

Simpson believes that the hands-on lessons his students learned about anatomy and bone structure will stick with them.

"It is one thing to read about skeletal structure in a book — it is something totally different to take what you have learned from the book and use it to put together a skeleton," Simpson said. "Students can apply the knowledge they gained from this project to biology and human anatomy, as well as animal science. Who knows? We may have an orthopedic surgeon come out of this class. ..."

Tom Dekle is communications director for Nelson County Public Schools. This is an edited version of his article that first appeared in The Kentucky Standard, a Nelson County newspaper.

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Speaking of proficiency

Language curriculum expanding to meet needs of students

By Susan Riddell

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Compétent. Versado. Tüchtig. Mahere. Jingtongde. Jukurensuru.

Kentucky students are learning to say “proficient” in a variety of languages and becoming proficient learners of the languages they are studying.

Even though world language courses aren’t considered part of Kentucky’s Core Content for Assessment, expectations of the 1990 Kentucky Education Reform Act said all students should know a foreign language, said Kentucky Department of Education World Language and International Education Consultant Jacque Van Houten.

Most high schools have always had elective language course offerings. Now, Kentucky P-12 schools are increasing their language offerings to prepare students for a global society that necessitates not only a background in world languages, but a proficient usage of the language.

There are numerous resources available for students interested in learning a world language, from online courses and assessments to immersion and cultural-exchange programs. However, getting students prepared for a global society starts first and foremost in the classroom.

“We can have all the requirements and instruction we want, but it comes down to the teaching,” Van Houten said. “If we don’t teach in the target language, we’re not going to reach proficiency. It’s not so much teaching culture, but teaching about healthy eating habits and fitness or other aspects of culture in the target language.

“We have to use the target language as the vehicle to connect with core content,” she said. “Teaching grade-level appropriate core content in Spanish, in Japanese, etc., gets you twice as much for the money.”

Public schools throughout Kentucky offer classes in Mandarin Chinese, French, German, Hebrew, Japanese, Latin, Russian, Spanish and Spanish for Hispanic students. Courses are available – depending on the school and school district –

at the preschool, primary, middle and high school levels.

Most of those offerings aren’t new to Kentucky schools. One new language offering, Chinese, is gaining popularity among students. Nelson County and Marion County school districts have hired teachers from China to teach language classes to elementary, middle and high school students. In Jefferson County, 2,595 students are studying Chinese at different levels, enough to rank the district very high nationally among school districts that offer the language.

Students who begin the Spanish immersion program at Maxwell Elementary (Fayette County) can continue immersion studies across the curriculum at Bryan Station Middle and High schools.

Hawthorne Elementary (Jefferson County) has served as a dual language immersion school the past several years. Jefferson County World Language Specialist Thomas Sauer said the best of Hawthorne’s immersion program is being incorporated into a pilot program at seven other elementary schools in the district.

“We’re taking the best of what’s been learned in immersion and placing that in other schools and using content to teach,” he said. “Students aren’t learning another language but rather using language as a vehicle to get to core content. What makes this unique is the students are demonstrating what they’ve learned in both languages.”

Since 2004, the Kentucky Council on Postsecondary Education (CPE) has required all students entering a four-year Kentucky college or university to have a minimum of two units of a world language for admittance to postsecondary studies. As more students pursue the pre-college curriculum, Kentucky public schools will need more language classrooms and more qualified teachers, Van Houten said.

Numbers, said Van Houten, indicate Kentucky is on pace to meet that need. “We’re right on target producing more teachers,” she said.

According to the CPE, the number of state college graduates major-

ing in a foreign language (Russian, German, French, Italian or Spanish) has increased each of the last three years. It’s critical these graduates enter the education field instead of going into the business world.

“World language is battling the business world,” said Lucas Gravitt, a first-year German teacher at Scott County High School. He planned to be an international business major when he enrolled in Georgetown College in 2003.

“The program I was interested in boasted a fabulous opportunity with great internships and the chance to get out of college making \$100,000 a year. After my first business class, I realized that was not going to be the case,” he said. “College students don’t realize how tough the job market is. If you get a job with an international business, knowing a second language isn’t the only qualifier.

“There is stability in education like none other,” Gravitt added. “I decided to teach German because of the need. The German language is vitally important to us as Americans. I knew I could make a difference in not only German education in America, but also in overall awareness of world language learning.”

Kentucky is benefiting from fast-track certification in the effort to increase the number of certified language teachers. A Northern Kentucky University (NKU) program, funded through grants, has certified language teachers (in Spanish, French, German, Japanese, Arabic, Latin and Chinese) with its six-week program. NKU also received a STARTALK grant last summer that allowed an added week for critical language teachers at the beginning of the program and a practice-teaching summer language camp for children at the end of the six weeks.

Overall, Kentucky is definitely on the road to language proficiency, according to Van Houten, the world languages consultant.

“I feel strongly about how well things are going for us and the fact that we’re considered (nationally) to be a pretty innovative service program,” she said.



Photo by Amy Wallot

Lucas Gravitt, first-year German language teacher at Scott County High School, listens to a student respond to a question during his German III AP class. Gravitt said he decided to teach rather than enter the international business world because of the need for world language teachers.

Language online and on educational TV

- Kentucky Virtual High School offers online courses in Spanish I, II, III and AP; French I, II, III and AP; German AP; and Chinese I and II. “Our goal is to teach students to read, write, understand and speak the languages,” said Beth Gaunce, with the Department of Education’s Division of Secondary and Virtual Learning. “We focus on their progress and not on averaging scores solely as a means of assessing a student’s progress.” www.kyvs.org
- Kentucky Educational Television (KET) offers German and Latin. According to KET distance-learning teacher John Krueger, a grant from the Corporation for Public Broadcasting for Innovation will fund an overhaul of KET’s language program with new Web 2.0 elements. “It’s an especially interesting time for German,” he said. www.dl.ket.org/faq/courses/1998-99sch.htm
- STAMP (Standards-based Measurement of Proficiency) is a Web-based assessment tool built to characterize proficiency levels tied to American Council on the Teaching of Foreign Languages’ performance guidelines. It tests reading, writing and speaking in real-world language situations. The Kentucky Department of Education is funding a pilot of this test for Level II Spanish and French. http://avantassessment.com/products/about_stamp.html
- The Kentucky Department of Education has information about world language learning in Kentucky classrooms. www.education.ky.gov/KDE/Instructional+Resources/High+School/Language+Learning/Other+World+Languages
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Focused on funding

Barren County grant writer shows district the money

By Susan Riddell

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Calling Holly Trowbridge greedy would be a compliment.

While the Barren County school district's grant writer does have dollar signs on her mind, all the money she amasses goes toward improving education for students in her district.

That's definitely not greed, according to Barren County Superintendent Jerry Ralston. It's something much better. "She's been a godsend for our district considering everything she's produced," Ralston said of Trowbridge, who has been the district's full-time grant writer for three years. "She's pulled in more than \$1.5 million (\$1,546,778.03 to date) in grant funds. The grants we focus on relate to instruction and achievement, and we want those funds to go to support student achievement.

"She has the ultimate rubric," Ralston added. "Either you're successful, or you don't have a job. I hate to put it that way, because she is so good and we're so proud of what she's accomplished for our district, but we made the decision to allocate the funds for her salary. We interviewed (applicants), and it's pretty obvious we made the right selection. It didn't take long to see our investment was very productive for us."

Trowbridge was hired by the

Barren County school district after Ralston and others studied programs in several districts in the state. He said his district looked at having a part-time grant writer who would have other duties, much like grant writers in many Kentucky districts. Barren County opted, however, for a full-time person whose sole function is grant writing.

It's a decision Ralston is glad he and the school board made.

"She is not pulled away from that focus with other responsibilities," he said. "She has more time to write those grants and do the research for them. That gives her time to understand what the grant is all about to better incorporate our needs into that grant."

Trowbridge agrees. "I've talked with others who have several different components as part of their jobs. Because so much research is required in writing an effective proposal, I'm blessed to be able to focus entirely on finding and acquiring grants," she said.

She compares her work to that of a detective or match-maker because of the time she spends at the computer researching to see if a grant is the right fit for the district's schools. "Having that amount of time available to me makes all the difference," she said.

A full-time grant writer also pays off when budget cuts loom in the near future, as is currently the case.



Photos by Amy Wallot

Renee Price, a teacher at Park City Elementary, works with Benjamin Rodriguez, left, Kayla Bowier, Robert Sydnor and Brandy Cowles in one of the school's four literacy labs. The Smart Board and other learning tools in the lab were purchased with grants obtained for the district by Holly Trowbridge, grant writer.

Gov. Steve Beshear has called for a 12 percent budget cut in the state education budget for fiscal year 2008-09.

"Having an advocate for the school district whose sole responsibility is to attain additional funding can become especially important during a time of expected budget cuts," Trowbridge said. "Because the school district has allowed me to concentrate only on grants and grant writing, the grants program here at Barren County has seen some success. Being able to focus only on grants allows adequate time to seek out and research grant opportunities as well as time to improve grant-writing techniques, which can produce positive results for the school district."

Superintendent Ralston said, "It's critical – especially in tight budget times – that we have someone who can generate funds to support the work we're doing in the classroom."

Trowbridge believes no grant is too big or too small to go after, as long as someone in the Barren County school district can benefit

from it.

"I try to put the same amount of emphasis on all grants, even the smaller ones," she said. "A \$500 grant means just as much to a teacher who can use that money to buy materials for her classroom versus a \$100,000 grant to purchase a districtwide program. The important question to ask when writing a grant, regardless of the money amount, is, 'Will this money truly help expand or extend what we've already got going on in our schools?' I only choose grants that we really need and that our students and teachers can benefit from."

An arts-infused field trip grant for Temple Hill Elementary students valued at \$394.50 is the smallest grant Trowbridge acquired for Barren County. The largest single grant has been a dropout prevention grant from the Kentucky Department of Education worth \$140,000.

Trowbridge has guided Barren County schools to grants from a host of funding sources including Lowe's, Toshiba, ING Financial

Services, Dollar General Literacy Foundation and the Kentucky Arts Council.

That money has gone toward books and supplies, drug-prevention activities, playground equipment for special-education students and much more.

Superintendent Ralston said he would recommend that every district hire a full-time grant writer.

"I would recommend someone like Holly to any district, but I think it's very important districts interview and be very selective to get the right person," he said. "Just because you write a grant doesn't mean you're going to be awarded a grant. It takes that research, that knowledge and that expertise put into a grant to attain it. You've got to have someone with the talent and the skills to write grants and someone who can be focused on doing that."

MORE INFO ...

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Upper primary student Robert Sydnor practices spelling at the Smart Board in a literacy lab at Park City Elementary that was purchased with grants.

Content leadership networks are 'priceless' to educators

By Faun S. Fishback

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When Kentucky educators talk about the Mathematics and Science Leadership Support Networks, they sound like an advertisement for MasterCard®.

It costs money.

It requires a commitment.

Educators must step out of their "comfort zones" and share new methods of teaching with their peers.

Yet, each of the participants contacted for this article gives a resounding "PRICELESS" to the benefits they are receiving.

"I feel that I am on level with science educators across the nation because of what I learn at the Science Leadership Support Network (SLSN)," said Katrina Slone, a 7th- and 8th-grade science teacher at Hindman Elementary (Knott County).

"Through the work that SLSN has done with curriculum alignment and deconstructing standards, I have been able to help my district develop a curriculum map in science and have been able to develop learning targets that help students better understand what they are learning," she said.

Rollanda Grubbs, a K-5 curriculum resource specialist, works with two LaRue County elementary schools to improve mathematics instruction and student progress.

"By working with all grade levels (K-12) on problem-solving tasks, I have been stretched, to say the least, to learn new material above the grade levels that I teach and to relearn material I have not used in many years," said Grubbs, a K-4 mathematics specialist. "We all need to know what we do to prepare students for the next level. ... Last year, we saw a huge improvement in our elementary mathematics scores."

The Mathematics and Science Leadership Support Networks provide support, ideas, resources and expertise for educators – from classroom teachers and department heads to district content consultants, principals and assistant superintendents.

There is something at every network meeting that participants can take back to their districts and put into practice the next day, said Kim Zeidler, director of the K-12 Math and Science Outreach Unit of the Partnership Institute for Math and Science Education Reform (PIMSER) at the University of Kentucky. PIMSER hosts the meetings and provides facilitators with strong content backgrounds to lead the sessions.

Diane Johnson, instructional supervisor for Lewis County schools and a doctoral student in science education at UK, leads the science network group. While it means extra time away from her district, Lewis County schools are benefiting.

"My involvement with the network has pushed me to deepen my understanding of a range of science concepts and to understand how these concepts develop from elementary through high school," she said. "We have capitalized on these training opportunities in my district by focusing on the most effective practices and have used the materials I receive through the network in district meetings."

The Kentucky Department of Education cosponsors programs for both networks. In addition, department mathematics and science consultants facilitate sessions and provide connections for participants to department programs and services.

This school year, three mathematics network groups have 105 participants from 57 districts. The science network group has 51 participants from 28 districts.

The networks are unique from other professional development because they focus on content and pedagogy using the most current research. This is keeping these Kentucky education leaders on the cutting edge of innovations that



Photo submitted by Debbie Owens, PIMSER

Doris Blackburn, a teacher at Inez Middle School (Martin County), uses manipulatives to prove a mathematics problem during a monthly meeting of the Mathematics Leadership Support Network.

could ultimately improve student achievement.

At each network meeting, participants explore a K-12 topic the group has expressed a desire to study. There is always a book discussion, as well as hands-on activities about the latest research in science or mathematics instruction. The lesson for the mathematics network always contains a literacy component.

One of the primary goals of the networks is to build leadership capacity for local improvement of mathematics and science teaching and learning. Participants learn strategies for working with adult learners and exchange ideas about content and leadership skills.

Applications for next year's Mathematics and Science Leadership Support Networks are posted online. The cost is \$1,250 for meetings, materials, facilitator fees and meals. Possible locations for the mathematics network meetings are Elizabethtown, Madisonville, Corbin and Lexington. The science network is set to meet in Lexington only.

What other participants say

• **Rachel Adams** is a 4th-grade science and language arts teacher at A.B. Combs Elementary (Perry County). "Involvement in the network has deepened my leadership skills," she said. "I return each month to my district and host a science cadre with district science teachers to share what I've learned. I also became a National Board Certified Teacher, applying the knowledge gained through network participation to meet the criteria for certification. I certified on my first try!"

• **Jamie-Marie Wilder** is a half-time 8th-grade mathematics teacher and half-time mathematics consultant at Lincoln County Middle School. "Mathematics is jumping out of books and becoming more alive to me," she said. "My understanding of mathematics has deepened because I have become a student learning how to transform teaching finite sets of problems from books to representing the same concepts with blocks, foam pieces and counters. I feel now that I can teach students to love mathematics because they can see it, touch it and manipulate it with the skills that the network has given me."

• **David Helm** is a science content specialist for Fayette County. He works with district middle and high schools.

"The network has been invaluable to me in my current position," said the former high school science teacher. "The experience has provided information and strategies for me to take back to teachers and principals in my district to share and implement in the schools and classrooms. The professional development, in my opinion, that we are doing for our teachers and principals is much higher quality as a result of participation in the network."

• **Marsha Reddick** is a middle-grades curriculum specialist for Adair County, a former mathematics teacher and a National Board Certified Teacher. She finds participation in the mathematics network a plus for small, rural school districts that often don't have access to a variety of resources.

"I've started a mathematics support network in my district," Reddick said. "We have professional discussions that would not take place if we did not get together – we're from different buildings and grade levels. But once a month we come together and focus on how we can move our students forward!"

• **Ken Mattingly** is science department chair and a 7th-grade science teacher at Rockcastle County Middle School. He teaches life, earth and physical science to 120 students.

"SLSN has helped me get at the specifics of what my students need to learn," he said. "I now see better how to break content up into meaningful chunks, to sequence it into an instructional unit and begin to make my students partners in their own learning."

• **Keith Embry**, a National Board Certified Teacher, spends half his time as a mathematics coach and the other as a science coach at Oldham County High School. He and two other Oldham County teachers attend the network meetings. Each goes to a different site and brings back information to discuss within the district's high schools.

"The secret is sharing what you've learned with other teachers," he said. "Our teachers are trying learning centers in high school – things a little more out of the box. Access to new materials is making a difference."

MORE INFO ...

<http://MLSN08-09.rsvpBOOK.com> – online registration for the Mathematics Leadership Support Network

<http://SLSN08-09.rsvpBOOK.com> – online registration for the Science Leadership Support Network

Kim Zeidler, director of the K-12 Math and Science Outreach Unit of the Partnership Institute for Math and Science Education Reform (PIMSER), (859) 257-4836, kim.zeidler@uky.edu

✓ 5 for Reading Success in the primary classroom

By Kelly Robertson
Adair County Schools

Our ever-evolving world continues to spin with doctors, astronauts, engineers, presidents and yes – teachers. Being a teacher myself, I regard primary teachers as notable individuals who gave each of these professionals the foundation they desired to be successful in life: the ability to read.

How is it that one individual can establish warm rapport with each child, give attention to each lost tooth and teach a roomful of 6-year-olds the most fantastic skill they will ever possess?

The ✓5 for Reading Success approach is a guide I developed for best practices in the primary classroom. These five components are essential to spark awe and curiosity in children and to make learning real in their lives. Students come to school with a great deal of needs, and the same is true with their reading development. The ✓5 approach addresses how to define and refine the teaching tools for developing readers.

1. ✓ Five essential components of reading:

Reading is a gradual process of immersing children in a learning environment that provokes thought and understanding. Solid reading instruction includes the following components of reading:

- phonemic awareness
- phonics
- fluency
- vocabulary
- comprehension

2. ✓ Direct small-group instruction:

When students are given a daily dose of direct, explicit, small-group reading instruction, individual progress is visible. Groups should be formed based on similar instructional needs. Flexible grouping is an integral part of success because as students' needs change, grouping structures and students within groups must change. Weekly assessments of reading fluency and comprehension guide the groupings and placement of students.

3. ✓ Reading assessments:

Reading assessment must be ongoing. To provide a true picture of growth in reading independence, students must be assessed frequently.

Assessment should drive reading instruction. Every 7-year-old student does not possess the same needs in his or her reading achievement.

Our district uses SRA Reading Mastery as its core reading program, and students have made great strides in one year. Using the weekly reading assessments, we can correct errors the instant they occur. This gives us confidence that our students are making progress. (More information about Reading Mastery is available online at <http://mcgraw-hill.co.uk/sra/readingmastery.htm>.)

Other research-based reading assessments teachers can use to measure the reading development of individual students include:

- DIBELS — The Dynamic Indicators of Basic Early Literacy Skills (Learn more about DIBELS at <http://dibels.uoregon.edu>.)
- GRADE — The Group Reading Assessment and Diagnostic Evaluation (Learn about GRADE at www.pearsonlearning.com. Type GRADE in the "Find a Product" box.)

Teachers can use other diagnostic measures including a phonological awareness screener, phonics screener, running records and high-frequency words lists.

4. ✓ Literacy centers:

Establishing literacy centers in the primary classroom can be overwhelming to the teacher as well as the students. I used to be one of those skeptics who wondered how to choose independent centers and make the students accountable for their learning while the teacher is engaged in small-group instruction. After hours of research and reading articles focused on literacy centers, I learned there are numerous options for designing and managing literacy center implementations. I chose a system I felt confident in implementing; therefore, I was able to create a productive learning environment during



Photo by Amy Wallot

Teacher Kelly Robertson works with Jaycob Buster, left, Tori Kimbler and Nealee Tarter as other students in her class work at additional literacy centers in the room at Colonel William Casey Elementary School (Adair County).

literacy center work.

To guide and select centers that address the needs of my students, I use the results of individual student reports from GRADE, weekly SRA assessments and the weekly Progress Monitoring of DIBELS.

My school is fortunate to have a check-out area in the teachers' workroom with an abundance of ready-made literacy centers. Cabinets house the centers, which are sorted by targeted skills of the five essential components of reading.

To provide differentiation among the students, our center chart is easily modified. It consists of stars with students' names and photographs of the centers. Each day the child finds his/her star and the matching center. Centers change on a daily basis.

Each student has a center contract for the week according to the individual's needs. Each child is paired with a buddy who shares a similar need on an isolated skill. As students' needs arise during a daily assessment, the center chart is easily adjusted.

I explain and model all centers as I introduce them to the students. Every center holds students accountable for the work expected of them

to ensure they remain on task and stay focused. Each pair of students must produce written results daily. The Reading First components are the focus of our literacy centers.

The key to success in productive literacy centers is establishing the routines for using the centers and doing the work. I use the first three weeks of school to model how students are expected to behave while participating in literacy centers. Once this routine is established with the students, behavior management is in control.

5. ✓ Collaboration:

Reading success happens school-wide through collaboration that involves Title I services, teachers of same grade levels, teachers of varying grade levels, special education teachers, a speech language pathologist and parents, to only name a few.

If a school relies on sound research to adopt and uniformly use reading instruction programs that provide explicit, systematic instruction, collaboration brings success and ease to children's reading achievement.

Whenever possible, it's helpful to develop schedules where teachers in the same grade level can work

as reading teams. Two teachers and I work together for 90 minutes daily to provide six reading placements for students to receive direct, explicit, small-group instruction.

Our Title I and special education teachers provide additional instruction by reinforcing the daily skills of the regular classroom.

Open communication between school and home is a vital connection that brings success. If parents are provided with tips and materials to work with, they will make reading an everyday activity in the home.

Through the ✓5 for Reading Success approach, teachers can begin to experience success with their students. Having the ability to become an independent reader is a great privilege as well as a pleasure in the life of a child. A child will always remember the teacher who gave him or her the confidence to become a reader!

Kelly Robertson is an early-primary teacher at Colonel William Casey Elementary School (Adair County). She can be reached at (270) 384-3367, kelly.robertson@adair.kyschools.us.

Introducing two state board members

Each month, *Kentucky Teacher* is profiling one or more of the 11 appointed members to the Kentucky Board of Education. This issue shines the spotlight on board members Janna Vice of Richmond and Jeanne Ferguson of Louisville.

Vice's grandfather made education a family priority

Janna Vice is the interim associate provost and professor of corporate communication at Eastern Kentucky University. She holds bachelor's and master's degrees from Eastern Kentucky University and a doctorate from the University of Kentucky.

She has taught professional and analytical writing at the college level for 30 years. Her teaching career includes being a professional organization presenter, author, consultant and seminar leader.

Vice was named the 1999 Kentucky Outstanding Business Education Teacher. She received the 2005 Outstanding Researcher Award and serves on the Alice Lloyd College Board of Trustees.

Vice chairs the state board's Curriculum, Instruction and Assessment Committee and also serves on the Audit Committee. Her term expires in April. She responds to questions posed by the *Kentucky Teacher* staff.

In your opinion, what makes Kentucky schools tick?

The strength of Kentucky schools is that "every child proficient and prepared for success" is more than a marketing slogan. This goal reflects the commitment of local teachers and school leaders, the support of state educators and legislators, the priority of governors, the involvement of parents and the investment of the business community.

What do you think are some unique aspects about education in Kentucky?

Kentucky's education system has unique strengths as well as challenges. Education reform placed Kentucky as a leader in developing a standards-based curriculum and assessment system. With the Kentucky Education Reform Act, we determined that education in Kentucky would not be "business as usual."

Where is education in Kentucky headed in your opinion?

Education in Kentucky has made great gains in helping students reach proficiency. Although improvements are significant, we need to see more progress in many middle schools and high schools. We need to close achievement gaps — recognizing that poverty is a major factor in lagging performance.

If you could pick the brain of another person, past or present, who would it be?

While I would love to talk with many people from the past, the person who comes to mind and is relevant for this discussion is my maternal grandfather, William Siler, from Whitley County. He raised six children during the Depression. As a man of wisdom and faith, a leader in his community and a person of very modest financial means, he insisted that all six children earn at least an associate's degree. All six accomplished that goal — and three earned teaching certificates. My mother was one of the three who became a teacher. Although my grandfather died when I was 4 years old, I am a direct benefactor of his life and of his priority on education.

What will teachers need most from future boards?

Teachers need the Kentucky Board of Education to ask the right questions and then listen to teachers' answers. They need the board, with input and guidance from education stakeholders, to help identify a balance of rigor, relevance and relationship. They need the board to always keep student learning, teacher welfare and local school leadership as top priorities.

Other than more money, what do Kentucky schools need most?

Kentucky schools need to build on the progress that has been made. We need enthusiastic principals and superintendents leading the way in every school and school district. We need teachers who engage every student in every class, challenging students to succeed and to be lifelong learners. We need the continued support of state and local leaders who believe in investing personally in education and Kentucky's students.

What are the biggest obstacles facing Kentucky children?

Poverty is one of the biggest obstacles facing Kentucky children. Many Kentucky students live in an impoverished culture where often education is not valued. A study conducted by the Prichard Committee indicated "poverty"

schools can excel when the leadership and school culture makes student success a priority. Evidence shows that school culture also can be an obstacle for students enrolled in schools that continue to be low-performing — especially in our high schools.

What do you want Kentucky's past and current teachers to know about you?

The expression that teachers "change lives" is true. I am deeply indebted to my teachers in elementary, high school and college who believed in me and challenged me to do my best. As a veteran teacher myself, I cannot imagine a more rewarding or challenging career.

I encourage teachers to set high expectations for their students. The teacher may be the only person in a student's life who says, "I believe in you, and I will help you achieve your goals."

Ferguson had many educational role models

Jeanne Ferguson is an adjunct professor at Jefferson Community College in Louisville, from which she retired as a full professor. She began her college teaching career at the University of Kentucky.

She served as the coordinator of the Speech Communication Program at Jefferson Community College and co-authored a text titled "You're Speaking, Who's Listening?" Ferguson also has taught courses at Bellarmine and Spalding universities in Louisville.

She serves on the boards of STAR (Systematic Treatment for Autistic Related Disorders) and the Louisville Theatrical Association. Ferguson holds a bachelor's degree from Ursuline College and a master's in communication from the University of Kentucky. Ferguson is a member of the board's Curriculum, Instruction and Assessment Committee. Her term expires in April 2010. Her answers to several questions follow.

What do you want Kentucky's past and current teachers to know about you?

As someone who has had a career in education, I feel especially privileged to serve on the Kentucky Board of Education. I have had the opportunity to teach high school, junior

college and college students. I appreciate the dedicated teachers who encourage, inspire and assist students to reach their goals.

Who was your favorite teacher and why?

As a student, I was blessed with a cadre of fine educators who instructed their students in the basics while providing the information and opportunities that helped us reach our goals. I remember my high school principal who visited every class to hand out report cards along with praise.

I am appreciative of my critic teacher who allowed me the freedom as a student teacher to try a variety of methods to teach senior high school English. I am grateful to the English Department chair who encouraged this undergraduate to attend graduate school.

In graduate school at the University of Kentucky, I was captivated by the teaching style of the late Wallace Briggs who opened worlds for his students with his skill and imagination. I listened intently to J.W. Patterson, Ph.D, as he recreated the times and events that influenced the significant speeches in American history. I learned much and admired immensely the diverse talents of my teachers.

What long-term goals do you have as a member of the board?

As a member of the state board of education, one of my goals is to assist all the education partners as they help all students reach proficiency by 2014. As a member of the state board, I consider myself to be a partner with teachers, students, parents and the education community. Our partnership, established in civility and promoting academic excellence and concern for all its members, will produce educated students who will be valued and valuable residents of our commonwealth.

Talk to Us!

Kentucky Teacher wants to know what you think, what you need from the Department of Education, what you want to see in future issues.

E-mail: kyteacher@education.ky.gov

Phone: (502) 564-2000

Fax: (502) 564-3049

Write: Kentucky Teacher

612 Capital Plaza Tower

500 Mero St.

Frankfort, KY 40601



Vice



Ferguson

LEADERSHIP LETTER

Compiled by Susan Riddell, susan.riddell@education.ky.gov

Primary mathematics intervention program sees early gains

Last school year, 45 mathematics intervention teachers began working in elementary schools throughout Kentucky to provide specialized instruction to more than 1,000 primary students.

Their work has contributed to a dramatic increase in mathematics scores among the early primary students who received the specialized mathematics intervention instruction. The improvement in mathematics skills was evidenced after the students took the 10C or 11C CAT Complete Battery of Terra Nova assessment and their results were compared to students across the nation.

Kindergarteners finished the year scoring higher than 64 percent of all students nationally who took the Terra Nova assessment. Their peers, who started out ahead but did not receive the specialized instruction, scored higher than only 36 percent of all students nationwide.

Early primary students began the school year outscoring only 8 percent of students across the nation on the Terra Nova assessment. By spring, the same students scored higher than 49 percent of all students in the nation.

The Kentucky Department of Education provides two-year funding for teachers to focus on early mathematics intervention. The Kentucky Center for Mathematics, located at Northern Kentucky University, trains and supports mathematics intervention teachers who return to their schools to help students gain foundational mathematics concepts and skills.

Cheri Griffin said she was excited to see student progress with just 30 hours of instruction that was “unreal.” She is a mathematics intervention teacher at Northern Elementary (Pendleton County).

“One of our goals of teacher training is awareness of specifically what a child understands,” said Jonathan Thomas, assistant director of diagnostic intervention at the center. “For example, when a child looks at the numeral 12 and says ‘twelve,’ does the child just see a squiggle that matches the word? Does he understand that 12 is ten and two or think that it is a one and a two? Is the child able to think about the parts within the 12, such as seven and five? Understanding exactly how children think allows teachers to provide the most effective instruction.”

The 45 schools that received Mathematics Achievement Fund grants, announced in

June 2006, are in their second year of funding. Another 41 schools began a two-year funding program this school year, and another 40 schools will receive two-year funding for the 2008-09 school year.

<http://kentuckymathematics.org/intervention/intervention.asp>

Contact: Jonathan Thomas, thomasj13@nku.edu

Principals can nominate African-American students for summer conference

The Kentucky Department of Education and the Kentucky Council on Postsecondary Education are sponsoring the 21st annual Conference for Academically Proficient African-American High School Juniors and Seniors. The conference supports the Kentucky Plan for Equal Opportunities in Postsecondary Education and the Partnership with the U.S. Department of Education, Office for Civil Rights, which requires the recruitment, enrollment and retention of African-American students in higher education institutions throughout the state.

Murray State University will host the conference, scheduled for June 13-14. There is no registration fee for the conference, but a \$10 room charge will apply for students and parents that require on-campus overnight accommodations.

To be eligible, a student must be a junior or senior in the fall of 2008, have at least a 2.75 grade-point average and demonstrate the ability or interest in postsecondary opportunities in higher education.

Principals are asked to nominate students for the conference no later than March 28.

Contact: Mary Marshall, (502) 564-3791, or Natasha Murray, (502) 564-1479, with the Kentucky Department of Education

Study shows PD for principals pays off

A national organization evaluating school reform and other national policies and programs has found promising results through a recent study connected to professional development offered to principals.

MDRC conducted the Instructional Leadership Study at three school districts with different urban backgrounds: one each in Austin, Texas; St. Paul, Minn.; and New York City. The study, which concentrated on elementary schools, took surveys from principals and 3rd- and 4th-grade teachers.

The survey asked about the professional development activities with which respondents had been involved, as well as other matters of interest. A research team also conducted observations in nearly 300 3rd-grade reading and mathematics classes. The report also used school-level data on achievement of

3rd-graders from state Web sites.

According to the findings, principals who receive more professional development are more actively involved in the professional development of their teachers, who in turn teach more professional development lessons of higher instructional quality. Schools where instructional quality is higher also have students with higher academic achievement, the study found.

MDRC is a nonprofit, nonpartisan education and social policy research organization dedicated to learning what works to improve programs and policies that affect the poor. MDRC designs and studies new approaches to the problems confronting public education such as low-income children, families and communities, low-wage workers, and people with serious barriers to employment.

www.mdrc.org/publications/470/execsum.html



Photo by Amy Wallot

Teachers in the workplace

Melanie Kiene, Simpson County High School curriculum coordinator, left; Robin Fowler, Simpson County High School teacher; and Beth Goode, Hart County High School teacher, listen to Greg Albertson explain the mathematics skills used in the process of making duct tape and other products at Berry Plastics, Tapes and Coatings Division, in Franklin (Simpson County). Educators involved in the High School Math Alliance program with the Green River Regional Educational Co-op toured the plant, where a variety of manufacturing processes are used to make more than 350 tapes. Albertson and other members of the plant leadership team told the educators how mathematics, statistics, problem solving and literacy skills are used by their employees so the teachers can make those connections in the classroom between mathematics and science and possible future jobs for their students.

BULLETIN BOARD

Compiled by Susan Riddell, susan.riddell@education.ky.gov

Conferences

Math Recovery

The National Math Recovery Conference will be April 15-18 in Covington. During the conference, 23 elementary mathematics sessions will be presented to help expand knowledge and expertise in teaching young children numeric concepts and skills.

Contact: Alice Gabbard, (859) 572-7691, gabbardal@nku.edu

<http://mathrecovery.org>

Behavior Institute

The 15th annual Behavior Institute will be June 23-25 in Lexington for special educators, paraprofessionals, administrators and other youth-serving professionals. Sponsors are the Kentucky Council for Children with Behavioral Disorders (KyCCBD), the Kentucky Department of Education (KDE), the Kentucky Center for School Safety (KCSS), the Kentucky Center for Instructional Discipline (KyCID) and Kentuckians Encouraging Youth to Succeed (KEYS).

www.state.ky.us/agencies/behave/misc/bi01.html

Technology in Education

"Putting the Pieces Together" is the theme for this year's Kentucky Society for Technology in Education (KySTE) summer conference, June 11-13, in Cold Spring in northern Kentucky. Mike Ribble, author of "Digital Citizenship in Schools," is the featured speaker. The conference's three strands will be Technical, Instructional Technology and Technology Leadership.

www.kyste.org

Teachers of History

The Kentucky Association of Teachers of History (KATH) will hold its annual conference Sept. 28 in Frankfort. The keynote speaker is Roger Daniels, a University of Cincinnati history professor emeritus and author of books about Asian Americans and immigration. This year's theme will be "Tradition and Transforming: Teaching East Asian History in a Global Setting." Conference participants will receive free classroom materials.

www.kyhistoryteachers.org

KASA call for presenters

The Kentucky Association of School Administrators (KASA) is seeking education session proposals for its 39th annual conference, July 16-18, in Louisville. The conference will focus on the extra degree of learning and

leadership needed to move Kentucky's students to proficiency while preparing them for the future. Proposals are due at the KASA office by March 17.

Contact: Rhonda Caldwell, rhonda@kasa.org

www.kasa.org

Sustainable schools

How to design, finance and operate high-performance schools is the theme of the seventh annual High-Performance Sustainable Schools Workshop March 18-19 in Louisville. School superintendents, board members, facilities managers, architects and engineers are invited to learn about the benefits and methods of designing a sustainable school. A separate track on the second day will address energy management in existing schools.

Contact: Pam Proctor, (859) 547-8008, pproctor@need.org

www.energy.ky.gov – Click on the "News/Events/Publications" link in the left-hand menu, then select "Calendar of Events."

Arts education

The Kentucky Alliance for Arts Education (KAAE) announces its annual "smART!" Conference in Louisville. The pre-conference is June 12-14, followed by sessions June 15-16. Up to 20 hours of professional development credit are available. Funding from the Kentucky Arts Council through its Lincoln Bicentennial Project Grant program supports this year's pre-conference. Teacher participants in this component of the conference will be eligible to apply for mini-grants to support Lincoln-focused arts-infused classroom units.

Contact: Kathi E.B. Ellis, kellis@kyartsed.org, or staff@kyartsed.org for an electronic application

Events

Smithsonian Science Education Academies

National Science Resources Center (NSRC) provides special access for teachers to the resources behind the scenes at the Smithsonian and other museums and facilities around Washington, D.C., during four summer academies. These academies offer powerful hands-on professional development experiences in four areas of science content: energy and motion (July 6-11), biodiversity (July 6-11), ecological field studies (July 20-25) and electricity and magnetism (July 20-25).

Contact: NSRC at (202) 633-2970, nsrpdcenter@si.edu

www.nsrconline.org

American Stars of Teaching award

The U.S. Department of Education's Teacher-to-Teacher Initiative is accepting nominations for 2008 American Stars of Teaching award until March 31.

Contact: Anita Deck, (800) 624-9120, ext. 5478, (304) 347-0478, anita.deck@edvantia.org

www.ed.gov/teachers/how/tools/initiative/index.html

Peace, security and conflict management institute

The U.S. Institute of Peace (USIP) is accepting applications for its summer institute for secondary social studies teachers, Aug. 3-9 in Washington, D.C. The application deadline is March 31.

www.usip.org/ed/summerinstitute/index.html

Exploring Mars geology

The Lunar and Planetary Institute is offering a week-long summer field experience July 13-19 for intermediate-grade-level science teachers, called "Floods and Flows: Exploring Mars Geology on Earth." This real-world experience is geared to enhance teaching about Earth and space science and to make connections between these fields of research. Applications are due April 7.

www.lpi.usra.edu/education/fieldtrips/2008

Resources

Free online AP review

The Kentucky Virtual High School (KVHS) is again offering an online Advanced Placement exam review free of charge to students attending school in Kentucky. Schools can register for the online review by identifying one contact person for the school who will receive instructions and be responsible for enrolling students in the AP Exam Review.

Contact: Kari Welch, KVHS, kari.welch@education.ky.gov, toll free at (866) 432-0008

Reading Rainbow contest

Students in kindergarten and primary can compete in the 14th annual Reading Rainbow Young Writers and Illustrators Contest. Kentucky Educational Television will choose Kentucky winners, and those students will go on to compete for prizes nationally. Stories must be the original work of the child and must be accompanied by at least five original color illustrations. Entries are due April 1.

www.ket.org/readingrainbow



Photo by Amy Wallot

North Middle School (Pulaski County)

BULLETIN BOARD (Continued)**Safe Routes to School**

The Kentucky Transportation Cabinet is accepting applications for the "Safe Routes to School" program, which promotes greater traffic safety around schools and better health for school children. The Safe Routes program was designed to enable and encourage children, including those with disabilities, to walk and ride bicycles to school. It also aims to facilitate the planning, development and implementation of projects that will improve safety while reducing traffic, fuel consumption and air pollution in the vicinity of schools. Applications are due by March 15.

<http://tea21.ky.gov/osp%20forms%202.htm>

'Hands-On Student Simulation' program

The Kentucky Crime Prevention Coalition has dates available for its free "Hands-On Student Simulation" program. Middle school students have the opportunity to drive a special mobility scooter and learn the effects of alcohol abuse.

Contact: Wayne Alexander, (859) 727-2678

National WWII Museum online essay contest

The National WWII Museum invites high school students to compete in its 2008 essay contest. The theme is "How can your community achieve victory?" Essays, which are not to exceed 1,000 words, are due by March 28. Only the first 500 entries will be accepted. The first-place winner will receive \$1,000, second-place gets \$750 and third-place \$500.

www.nationalww2museum.org/education/studentessays.html

UK College of Education alumni information update

The University of Kentucky College of Education is updating its list of program alumni (1970 to present) to identify those who are public school teachers, private school teachers, postsecondary educators or who entered different professions. Graduates from business, elementary, English, mathematics, science, social studies and middle school programs will be listed on separate pages of the College of Education Web site.

Contact: Professor William Stilwell, westil3@email.uky.edu

www.uky.edu/education/edc/edcalum.html

Drama professional development opportunities

StageLab, a Louisville-based organization of professional theater artists and artist educators, offers schoolwide or districtwide professional development. All four principal artists have extensive K-12 teaching experience, and their areas of expertise span the Big Ideas in the Kentucky Core Content Version 4.1.

Contact: stagelab@insightbb.com

Internet youth safety award

The Kentucky School Boards Association (KSBA) and the Kentucky Center for School Safety (KCSS) are accepting nominations for the inaugural Internet Youth Safety Empowerment Award program. The award is in conjunction with the 14th annual "Safe Schools, Successful Students" conference, Oct. 6-7, in Louisville. The award is open to Kentucky public elementary, middle and high school students and their related Internet safety programs. Nominations are due by July 31.

www.kycss.org/clear/conferences/pdfs&docs/Youth%20Internet%20Award.doc

Project Ignition grant

Project Ignition, a national service-learning grant program promoting safe teen driving, asks students in grades 9-12 and their teachers to work as a team to develop teen driver safety campaigns that change how their schools and communities approach teenage driving. Applications are being accepted for the 2008-09 school year. The first 100 applicants receive a copy of "Getting Started in Service-Learning" and a Project Ignition T-shirt. Application deadline is May 16.

www.sfprojectignition.com/00home

Access to dispatches from polar scientists

The Web site for San Francisco's Exploratorium museum gives Kentucky students the chance to meet penguin biologists, glaciologists, cosmologists, geologists and marine scientists working in Antarctica and the Arctic. These scientists are documenting their adventures, in real time, so others can follow their research, ask questions and share in discoveries as they occur. Photos, videos and blogs offer an up-close-and-personal look at research in extreme environments through the thoughts and experiences of the scientists working there.

www.exploratorium.edu/icestories/index.php



Photo by Amy Wallot

Shining light on the subject

Morgan Epperson, mathematics tutor at North Middle School (Pulaski County), right, and 7th-grade student Evan Holbrook find a sunny spot in a hallway to talk about a mathematics problem Holbrook is trying to solve.

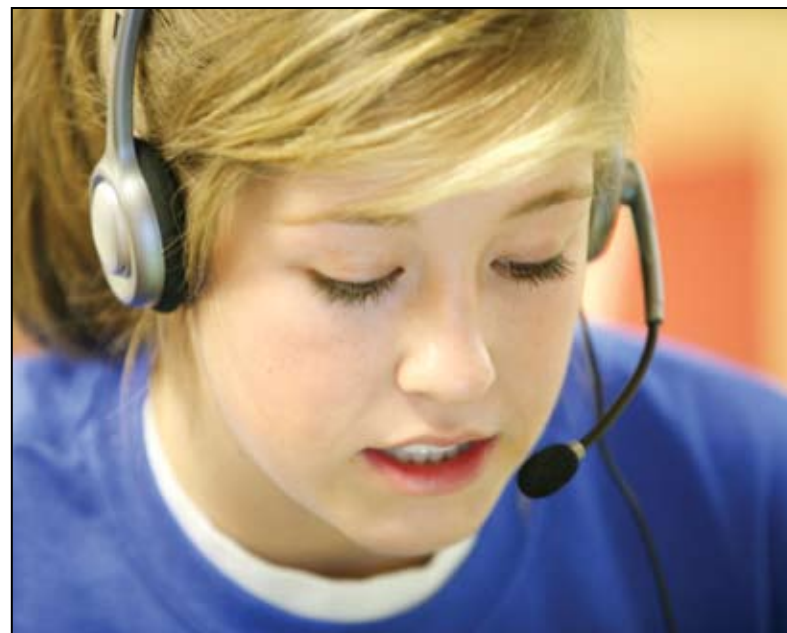
EXPLORE, PLAN results released

Kentucky's 8th- and 10th-grade public school students participated in a statewide administration of the EXPLORE and PLAN assessments last fall. Overall school scores are mid-range or higher on each assessment's scoring scale.

EXPLORE assesses students in English, mathematics, reading and science. The composite score for the 48,450 Kentucky 8th-graders who took the assessment was 14.5 compared to 14.9 scored by students across the nation who took the test. The scoring scale is one to 25.

PLAN assesses the same four content areas. The composite score for the 50,097 Kentucky 10th-graders who took the test was 16.3 compared to 17.5 scored by their peers across the country who took the test. The scoring scale is one to 32.

EXPLORE and PLAN data are posted on the Kentucky Department of Education's Web site at www.education.ky.gov. Click on "Testing and Reporting" in the left-hand menu.



Photos by Amy Wallot

Ashley Grabowski, above, is part of the communications team that relayed information from mission control to other teams working to evacuate people from the natural disasters on Montserrat. At left, members of the hurricane team, Ford Robbins, front, Lucas Bragg, Molly Shircliff, Lauren Ellis and Taylor Austin, back, evaluate data and analyze the weather information about the approaching hurricane.

E-mission: Operation Montserrat

Montserrat, an island in the Caribbean, is in danger! As a hurricane gathers strength and heads for the island, a dormant volcano begins making noises like it's going to erupt.

The disasters were simulated, but students in Shane London's freshman integrated earth science class at the Trojan Academy (Barren County) worked as if thousands of lives really depended on their decisions.

They quickly got caught up in the realism and excitement of E-mission: Operation Montserrat, a simulated technology program aligned to Kentucky's Core Content that uses students' mathematics skills and science knowledge to solve real-life problems. Students track the oncoming storm, monitor seismic activity and make plans to evacuate the island's residents.

The program, created by the Challenger Center for Space Science

Education, is available to all Kentucky schools through the state's three Challenger Learning Centers, in Hazard, Radcliff and Paducah. For more information, contact Margaret Anna Potter, E-mission director, at (270) 534-3343 or Tom Cravens, director of the Hazard Challenger Learning Center, toll free at (800) 246-7521, ext. 73050, or tom.cravens@kctcs.edu.



Luke Deckard, Thalia Silab and Kelsey Anderson use their mathematics and problem-solving skills to analyze volcanic activity on Montserrat and make decisions on how to help the island's inhabitants.



Reporters for the volcano and hurricane teams, Tiana Sheehan, left, and Lauren Ellis, post the latest information from their teams on the whiteboard for the rest of the class to see during the E-mission at Barren County's Trojan Academy.



Matt Wallace, a member of the evacuation team, studies a map while planning how best to relocate inhabitants on the Caribbean Island of Montserrat after two natural disasters.